

Appln. No. 09/886,765

Docket No. 11-1168

REMARKS

Claims 1-9 were originally filed and claims 7-9 have been withdrawn from consideration, Applicant having elected, without traverse, to proceed with the examination of claims 1-6. In the aforementioned Office action, claims 1-6 were rejected under 35 U.S.C. §112, second paragraph. In addition, the drawings were objected to under 37 C.F.R. §1.83(a). By this amendment, the claims have been amended in an effort to overcome the rejection, and proposed changes to the drawings are submitted for the Examiner's approval.

Objection to the Drawings:

The drawings were objected to on two separate grounds: first that they failed to illustrate one or more "platelets" as claimed, and second that they contained quadrant identification symbols that are artifacts of a computer aided design (CAD) program. With respect to the latter objection, the attached proposed correction to the drawings deletes the offending identification symbols in Figure 1. In addition, Applicant notes that the numeral "14" was used to indicate both a combustion chamber in Figure 1 and injector blades in Figure 2. Applicant proposes to amend Figure 1 to use reference numeral "13" for the combustion chamber, and to amend the specification for consistency in this regard.

The first ground for objection to the drawings, pertaining to the illustration of "platelets," requires a little more explanation, but is not believed to require amendment of the drawings, other than the addition of reference numerals. Applicant has acknowledged that platelet manufacturing technology is well known in the technical literature, although not in the field of the invention. In accordance with this technology,

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complex three-dimensional components are manufactured in thin slices, referred to as "platelets," which are stacked together on alignment pins and then diffusion bonded at high pressure to form a desired three-dimensional component, containing all the desired internal passages. Each platelet is formed by selectively etching away portions that form the internal passages, using conventional photolithographic techniques for masking and patterning. Figure 2 shows a portion of a bank of cavity injector nozzles 12, with portions cut away for purpose of illustration. The entire bank of nozzles is fabricated in the form of a stack of platelets bonded together. Figure 3 is described in the specification as "a reproduction of a scanning electron microscope photograph of a multiple platelet, diffusion bond segment of the cavity injection structure shown in Figure 2." Therefore, Figure 3 is intended to show a typical platelet segment, including the same gas and water channels that are also visible in Figure 2. Figure 3 may be thought of as a view of a single platelet or multiple stacked platelets. It is apparent from the shapes of the passages in Figures 2 and 3 that the platelets are oriented in planes perpendicular to the direction of flow through the water cooling channels 20 and also perpendicular to the longitudinal dimension of the injector blades 14. However, the platelets could be oriented differently without departing from the invention. Accordingly, it is Applicant's belief that the claimed platelets are already shown in the drawings in Figure 3. Reference numeral 14 has been added to Figure 3, to enhance the correlation between Figures 2 and 3. Extraneous identifying symbols in Figure 3 have been deleted in the proposed corrections to the drawings.

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Rejection Under Section 112, Second Paragraph:

In the comments accompanying the rejection, three separate grounds of rejection were identified:

a) In claims 1 and 4, it was said to be "not clear within the claim language what is meant by applicant when reciting the limitation of 'all required passages.'"

b) In claims 1 and 4, "Applicant has not structurally defined a passage for the gas thereby the claim is incomplete."

c) Claims 1 and 4 are said to be "incomplete for omitting essential structural cooperative relationships and elements, ... (specifically) platelets and injector blades."

As to ground a), claims 1 and 4 have been amended to avoid use of the terms "all required" passages.

As to ground b), claims 1 and 4 have been amended to recite "internal passages for flow of gas."

As to ground c), claims 1 and 4 have been amended to clarify the relationship between the platelets and the injector blades. Applicant is willing to amend the claims further in this regard if the Examiner still believes that the relationship or connection is still not well defined in the claims.

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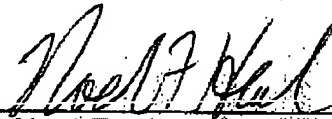
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C nclusi n:

In view of the foregoing, th application is now believed to be in condition for allowance. Upon approval of the proposed drawing changes, Applicant will submit replacement drawings. Formal notification of allowability of the application is respectfully requested.

Respectfully submitted,

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